

SEQUENCE LISTING

SEQ ID NO: 1 - hCARa sequence ACCESSION CAA83016

1 MASREDELRN CVVCGDQATG YHFHALTCEG CKGFFRRTVS KSIGPTCPFA
GSCEVSKTQR

5 61 RHCPACRLQK CLDAGMRKDM ILSAEALALR RAKQAQRRRAQ QTPVQLSKEQ
EELIRTLGGA

121 HTRHMGTMFE QFVQFRPPAH LFIHHQPLPT LAPVLPLVTH FADINTFMVL
QVIKFTKDLP

181 VFRSLPIEDQ ISLLKGAAVE ICHIVLNTTF CLQTQNFLCG PLRYTIEDGA

10 RVGFQVEFLE

241 LLFHFHGTLR KLQLQEPEYV LLAAMALFSP DRPGVTQRDE IDQLQEEMAL
TLQSYIKGQQ

301 RRPDRFLYA KLLGLLAELR SINEAYGYQI QHIQGLSAMM PLLQEICS

15 SEQ ID NO: 2 - mCAR β 1, mCAR1, ACCESSION AAC53349

1 MTAMLTLETM ASEEEYGPRN CVVCGDRATG YHFHALTCEG CKGFFRRTVS
KTIGPICPFA

61 GRCEVSKAQR RHCPACRLQK CLNVGMRKDM ILSAEALALR RARQAQRRAE
KASLQLNQQQ

20 121 KELVQILLGA HTRHVGPLFD QFVQFKPPAY LFMHHRPFQP RGPVLP LLTH
FADINTFMVQ

181 QIIKFTKDLP LFRSLTMEDQ ISLLKGAAVE ILHISLNTTF CLQTENFFCG
PLCYKMEDAV

241 HAGFYEFLE SILHFHKNLK GLHLQEPEYV LMAATALFSP DRPGVTQREE

25 IDQLQEEMAL

301 ILNNHIMEQQ SRLQSRFLYA KLMGLLADLR SINNAYSSEL QRLEELSAMT
PLLGEICS

SEQ ID NO: 3 mCAR β 2 mCAR2, ACCESSION AAC53350

30 1 MTAMLTLETM ASEEEYGPRN CVVCGDRATG YHFHALTCEG CKGFFRRTVS
KTIGPICPFA

61 GRCEVSKAQR RHCPACRLQK CLNVGMRKDM ILSAEALALR RARQAQRRAE
KASLQLNQQQ

121 KELVQILLGA HTRHVGPLFD QFVQFKPPAY LFMHHRPFQP RGPVLPLLLTH
 FADINTFMVQ
 181 QIKFTKDLP LFRSLTMEDQ ISLLKGAAVE ILHISLNTTF CLQTENFFCG
 PLCYKMEDAV

5 241 HAGFQYEFLE SILHFHKNLK GLHLQEPEYV LMAATALFSP GFCMQS

SEQ ID NO: 4 – murine CAR β genomic nucleotide sequence – Section A

AAAATTTACCCAACATAGATTTATCTAATGTAATTCCTATCTGCAGAACATCCAA
 ATACTTTGGAAATTATTTNTTGTGGTTGTAGCTGTTTGAATGTAAACATATATTCA
 10 AAAAAACTCTTCATGGTGTAGCATTGGGCAAGCTATGAGGATACCTACTTCT
 GGTTATTTACTAAAAGTTGATAGCCAGGCAGTGGTGGCACACACCTTTAATCCCA
 GCACTTGGGAGGCAGAGGCAGGTGGAATTATGAGTTTGAGGCCAGCCTGGTCTA
 CAGAGTGGGTTCAGGTTCAGCCAGGGCTACACAGAGAAAACCTGTCTCAAAAAG
 AAGGAGGAGGAGGAGGAAAGAGGAAAGAGGAGGAAGAAGATCTTTTGTTTTGA
 15 ATAGCATACAGTGAAAATTTCCGGTTTCTTTAGCAACTCAGTTGTGTACATGATG
 TCTTTCTGGAAGCTGTCTTGTGAGCAGACATGTGATGTTATCACAATAGAAAGC

SEQ ID NO: 5 – murine CAR β genomic nucleotide sequence – Section B

AAAGAGGTCATCAGGCTTGGCAGCAAGTGCCTTGCCTACCGAGTCTTTACACCA
 20 GCTCCACCGTGGTTTTTGAGACAGTCTCCCACTGGACTGGATTTACGAAGAAAG
 CTAGGCTTGCCTTCTGTCTCTGCCTCCTGGCATTGGAATTATGAGTTGTTCCAC
 CGTGCCATTTTTAAAAATGTAGGTTCTAGGAATTAAACTCGGCTCTCGGTGCTTA
 TATAGTGAGTACTTTACAGAGGGAGTCACCTTGCCAGCACCTAGAATTCACTTTT
 ATTCATATCCAGTCTCCCCACGTAAGAAAGTGGGATCCCTTCTAGTGTTACACC
 25 TAAGTTCTTAGTTGGATACCGAAGTCTTTTTTTAACAGATCTCTGGGGCTCAGAA
 GGCAAGAGCTCCTTGCAGAGGATTTAACCTCAATTCCTAGTACTCAACTTGCCAG
 CTCATAACTGCCTATAACTCTAGTCCCAGAAGATCAGACATTGTCCTCTGATCTCT
 GTGGGTACTAGGTATATACATTTAAAAAAAATCAATAAAAAATTTAAAAAAGA
 AAAGAAAAAGAAAGAAAGAAAAATCCTTTGGGAGCCTGGTATAATTGTTATAGCT
 30 ACCTTTTTTTTTTTTTTTTTTTTTTTTACCATTGTCAAAGTGCACGTGAAAAAG
 CTTGCCATCTCTCCCATGTTTCTGGCTTATTCAGGATCCATGCAAAAAGGGGA
 GTGTAGATTTAGCCTAAAGCTCACCCACAGGGAAATCCTCCAGGAGTCTAGTAA
 GCAGCAGCTTTAATGAGTCATGAGGTCCTGGCCCCCTCCCCATCTGCCACCAACC
 AACACTTCTCGGGCATGCTAGGAACCCCCACCCACCCACACCCACACCCAGGT

CTTTGCCCTGGGTCCAGAGTCTGGGTCTACCTACATATGGCACCGAGGATACCT
 AGAGGCCCCATGCAAGAGAAGGCCCTTGTTTTCCAGGCACTAAGGACCGCAGTC
 CCTAATTCCTGGCAGTTCTGAGATCTCAAGGAAAGCAGGGTCAGCGAGGAGGC
 CTGGGGAGAGGAGGCATCTACACCCGATCTTGTGGCCTGCTGCCTAAGGAAAA
 5 CAGGTAGGTAATCCGTTGGAGGCCAGAGACAAAAAGCAACATTTTTGCTTTTAAT
 GTCCTCAGTGCTGGGGAGCCCGGTGTGAGGCTGGGCAGTCTTGGGAAGAGATTCT
 GTAGAGGAGAGAGAAGAGAGTCTTATGGCCCAGTGCTGATTCTCAACTCCTCCC
 ACATTACAGGAGACCATGACAGCTATGCTAACTAGAAACCATGGCCAGTGAAG
 AAGAATATGGGCCGAGGAACTGTGTGGTGTGTGGAGACCGGGCCACAGGCTATC
 10 ATTTCCACGCCCTGACTTGTGAGGGCTGCAAGGGCTTCTTCAGGTGAATGCTTCC
 TCCCCAACAGAAACAACCCCGACATTTCTATCAGTCCACCTTTAAACACTGGTAC
 ACCTCCAAGTTATAATCCTCTTGCAGCTAAGCTGCACTGCCAGTGCTAGCACT
 CTCAATCTTGCTGACCACAACGCAGTGTGAAACTGGTGACCTAATGACAAGGCA
 GGTTAACCATTGTCCCAGAGACAGAGCCTAAGAGTCAAGAACACTTGTGTAGC
 15 ACACACTACCTGCAAAGCACCGAGATGATTGCCACACGAGGGTTCCTGAGTAAC
 CTTGTGTTCTCATGAAAACGCTCCAACCTACCTCTGAAGACCTTTGAGCACAGCTC
 AGATGAGTCTGTTGTAAATCGATCC

SEQ ID NO: 6-- murine CAR β genomic nucleotide sequence – Section C

20 TGCATTGCTTTCTACTGAAGTGTATCACAGATGAATATGAGATCGACAGAAAGTG
 TGCAGGGATCCCCCTGCCATCTGGAAACACTTAATTCAATGAAGTCCCAAGGAA
 GCCTCAGAAACTCTTCTTCTCCTCCTCCTTATCTGGGGAGGTGGAGTGGCCC
 CAACTGAAGGGATGGCTGAAAGGTGCTCGCTGCTGTTCTCAACAGCTTTGTCATC
 TCTCTTGCCTGACACAGTGATACTGTCAGCAGAAGCCCTGGCATTGCGGCGAGCC
 25 AGACAGGCACAGCGGCGGGCAGAGAAAGCATCTTGCAACTGAATCAGCAGCAG
 AAAGAACTGGTCCAGATCCTCCTCGGGGCCACACTCGCCATGTGGGCCCCATGT
 TTGACCAGTTTGTGCAGTTCAAGGTGAGAACTTAACCAGGATGTGACCTGGGTAC
 CTGAGGAGGTAACCCACAGAAGAAGGCTATGCCCTGATGGAGGACA

30 SEQ ID NO: 7- Sensor peptide sequence
 ILRKLLQE

SEQ ID NO: 8- Hamster CAR nucleotide sequence

CTTGTTTTCTAGGGACCAAGGACAATCCCTAATTCCTGCAGTTCCTGAGACCACA
 AGGAAAGCAGGGTCATCGTGGAGGCTTGGAGACAGGCATCTCATACCAGATTTT
 GTGACCTGCGTGTGTCTACTGCCTAAGAGAAAACAGGAGACCATGACAGCTACG
 CTAACACTCGAAACCAAGGCCAGTGGAGAGGAATATGGACCGAGGAACTGTGTG
 5 GTGTGTGGAGACCAGCCACGGGCTACCATTTCATGCCCTGACTTGTGAGGGCT
 GCAAAGGCTTCTTCAGACGAACTGTCAGCAAAACCATTAGTCCCATCTGTCCATT
 TTCTGGAAGCTGTGAGATCAGCAGAGCCAGAGACGCCACTGCCAGCCTGCAG
 GTTGCGAAGTGCCTAAACGCTGGCATGAGGAAAAGCATGATACTGTCAGCAGA
 AGCCCTGTCGTTGCGGCGAGCCAGGCAGGCACAGCGGCGGGCACAAAAAGCTTC
 10 CGTGCGAGATGACTCAGGAGCGGAAGGAGCTGGTCCAGACCCCTCATAGGGGCCCA
 CACCCGCCACATGGGCCCCATGTTTGACCAGTTTGTGAAGCTCAGGCCTCCAGCT
 TACCTGTTACCCATCACCGGCCCTCCTCCCCGCTGGTCCCCCGCGTTACCACT
 GCTCACACACTTTGCAGATGTCAACACTTTCATGGTGCAGCAGATTATCAAGTTC
 ACCAAGGAACTGCCCTTTTTCGGTCCCTACCCGTGGAGGACCAGATCTCCCTTC
 15 TCAAGGGAGCAGCTGTGGAATATTGCATATCTCACTCAACACTACTTTCTGTCT
 TCAAACACAGAATTTCTTGTGGGCCACTTTGCTACAAAATGGAAGACGCAGCC
 CACGCAGGGTTCGGTACGAATATGTGGAGTTGATCTTCGCTTCCATGGGACAC
 TGAAGCGACTGCAGCTCCAAGAGCCTGAGTATGTGCTCATGACTGCCATGGCCCT
 CTTCTCTCCTGACAGGCCTGGAATCACCCAGAGAGAAGAGATTGACCAGCTGCA
 20 AGAGGAGATGGCACTGATTTTGAACAACACTACATTATGGAACAGCAGCCAAGGCC
 CCAGAGTCGGTTTCTGTACGCAAAGCTGATGGGCCTGCTGGCTGAGCTCCGGAGC
 ATAAACAATGCATACTCATATGAAATACGGCGCATCCAGGGACTGTCCGCTATG
 ATGCCACTACTTGGGGAAATCTGCAGCTGAGGCTCAGGCTTGCTCCTTCCCCAG
 GGCCCTGGGATTCAATTGGAAGGGGAAATGTCTGAGCTAAAAGGAGCT
 25 CAGTGACAGCAAAAAACACTGGACAGTNGGAAAAAANNNNNNNNNNNNNAAA
 AGCGACCTGCCCGGGCGGCCGTTTCAGC

SEQ ID NO: 9- Predicted amino acid sequence of hamster CAR

30 MTATLTLETKASGEEYGPRNCVVCGRATGYHFHALTCEGCKGFFRRTVSKTISPICP
 FSGSCEISRARRHCPACRLQKCLNAGMRKDMILSAEALSLRRARQAQRRQAQKASV
 QMTQERKELVQTLIGAHTRHMGPMFDQFVKLRPPAYLFTHHRPSSPLVPPALPLLTH
 FADVNTFMVQIIKFTKELPLFRSLPVEDQISLLKGA AVEILHISLNTTFCLQTQNFFCG
 PLCYKMEDAAHAGFRYEYVELIFRFHGLKRLQLQEPEYVLMTAMALFSPDRPGITQ

REEIDQLQEEMALILNNYIMEQQPRPQSRFLYAKLMGLLAELRSINNAYSYEIRRIQG
LSAMMPLLGEICS

SEQ ID NO: 10 - Oligo 2930

5 CCATAAACGTGTTGATATCTGCAAAGTGTGCGAGCAGAGGCAACACGGGGCCCC
GAGG

SEQ ID NO: 11 - Oligo 2931

CTCTACAGCCTCCAGCCTATCTGTTCATGCATCACCGGCCTTTCCAGCCTCGGGGC
10 CC